Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) An image processing apparatus comprising:

      ~~sorting~~ <u>first</u> means for ~~executing sorting processing of~~ <u>obtaining a processed image by</u> sorting ~~a train of~~ pixel<u>s</u> ~~values within the same line~~ of ~~a radiation~~ <u>an original</u> image ~~and thus rearranging the train of pixel values within the same line~~ <u>into an order</u> from pixels having higher pixel values to pixels having lower pixel values;

      ~~analyzing~~ <u>second</u> means for calculating a characteristic value from a predetermined region of the <u>processed</u> image ~~after the sorting processing~~; and

      gradation transforming means for executing gradation transformation processing of the ~~radiation~~ <u>original</u> image based on the characteristic value.

2.   (Currently Amended) The apparatus according <u>to</u> claim 1, further ~~comprised of~~ <u>comprising:</u>

      irradiation region recognizing means for extracting an irradiation region ~~region~~ from the ~~radiation~~ <u>original</u> image,

      wherein said ~~sorting~~ <u>first</u> means executes the sorting ~~process of the radiation~~ image<u>s</u> within the extracted irradiation region ~~region~~.

3.   (Currently Amended) The apparatus according <u>to</u> claim 1, wherein the predetermined region for the calculation by said ~~analyzing~~ <u>second</u> means is set as a region separated at a predetermined distance from an end on ~~the side of a low pixel value~~ <u>a low-pixel-value side</u> in the <u>processed</u> image ~~having undergone the sorting processing~~.

4.   (Currently Amended) The apparatus according <u>to</u> claim 1, wherein the ~~radiation~~ <u>original</u> image contains one or more regions of a gas part and a spinal part in the image.

5.   (Currently Amended) An image processing apparatus comprising:

      radiation generating means for generating radiation;

a ~~two-dimensions~~ two-dimensional X-ray sensor for transforming the radiation into ~~a radiation~~ an original image;

~~sorting~~ first means for ~~executing sorting processing of~~ obtaining a processed image by sorting ~~a train of~~ pixels ~~values within the same line~~ of the ~~radiation~~ original image ~~and thus rearranging the train of pixel values within the same line~~ into an order from pixels having higher pixel values to pixels having lower pixel values;

~~analyzing~~ second means for calculating a characteristic value from a predetermined region of the processed image ~~after the sorting processing~~; and

gradation transforming means for executing gradation transformation processing of the ~~radiation~~ original image based on the characteristic value.

6.   (Currently Amended) An image processing method comprising:

a ~~sorting~~ step of ~~executing sorting processing of~~ obtaining a processed image sorting ~~a train of~~ pixels ~~values within the same line~~ of ~~a radiation~~ an original image into an order ~~and thus rearranging the train of pixel values within the same line~~ from pixels having higher pixel values to pixels having lower pixel values;

an ~~analyzing~~ a second step of calculating a characteristic value from a predetermined region of the processed image ~~after the sorting processing~~; and

a gradation transforming step of executing gradation transformation processing of the ~~radiation~~ original image based on the characteristic value.

7.   (Currently Amended) A program stored on a computer-readable medium for making a computer realize said image processing method according to claim 6.

8.   (Cancelled)